

In the Claims:

1. (Currently Amended) A fuel cell apparatus with a reformer and a mixture formation means, said mixture formation means comprising:

a fuel feed means;

an air feed means;

a mixture formation area, and

a fuel heating means,

wherein the fuel feed means includes a pressure impulse injection means,

wherein the mixture formation area is supplied with air and is positioned in line downstream of the fuel heating means and includes a swirl chamber into which a nozzle connected to the pressure impulse injection means discharges, and

wherein the fuel heating means is positioned in line downstream of the pressure impulse injection means as a means for preheating the fuel to a temperature producing spontaneous fuel vaporization at a nozzle outlet of said nozzle.

2. (Previously Presented) The fuel cell apparatus as claimed in claim 1, wherein the pressure impulse injection means includes a changeover valve and the fuel heating means is located in a fuel line located between the changeover valve and the nozzle.

3. (Previously Presented) The fuel cell apparatus as claimed in claim 1, wherein the fuel heating means heats the fuel to the temperature at which the vapor pressure of the fuel is below a holding pressure determined by a pressure holding valve.

4. (Previously Presented) The fuel cell apparatus as claimed in claim 1, wherein the air feed means includes an air heater.

5. (Previously Presented) The fuel cell apparatus as claimed in claim 4, wherein the air heater heats the air to a temperature at which condensation of the fuel in the swirl chamber does not occur.

6. (Previously Presented) The fuel cell apparatus as claimed in claim 1, wherein the air feed supplies air continuously.